Amendments to the Specification:

Please replace paragraph [0011] as follows:

[0011] In order to simulate a well test, whatever the medium, this equation has to be solved in space and in time. ~~Defining~~ Discretization of the reservoir (mesh pattern) is therefore performed and solution of the problem ~~finds~~ consists in finding the pressures of the meshes with time, itself ~~defined~~ discretized in a certain number of time intervals.

Please replace paragraph [0019] as follows:

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] Other features and advantages of the method according to the invention will be clear from reading the description hereafter of a non limitative realisation example, with reference to the accompanying drawings wherein :

- Fig. 1 shows an example of a 2D fracture mesh, ~~FM~~ Fracture Mesh,
- Fig. 2 shows an example of a 2D matrix block, ~~MB~~ Matrix Block,
- Fig. 3 shows an imposed flow rate variation curve F(t) in a well test,
- Fig. 4 shows an example of a fracture network for which the method according to the invention leads to a substantial reduction in the number of meshes to be processed, and

Figs. 5 and 6 illustrate flow charts of the method of the present invention.

Please replace paragraph [0041] as follows:

[0041] Apart from the pressures, the terms of this equation are known. The pore volumes of the fracture meshes and of the matrix blocks (ϕ_i) are known by means of the mesh pattern, the fracture-fracture and matrix-fracture transmissivities (T_{ij}) are calculated as described above and flow rates (Q_i) are zero everywhere except at the well-reservoir connections where they are imposed. ~~The mesh pattern is known using the method described in the above cited US patent 6,023,656. Fracture lengths and openings (widths) are given by the characteristics of the fracture network and are input data. The pore volume in a given fracture mesh is determined from the length of fractures within the mesh and the corresponding opening of the fracture~~.